Reaching Consensus and Planning Ahead

GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of
Health and Community Services
Policy Development Division

Fall 2001
Revised October 2002

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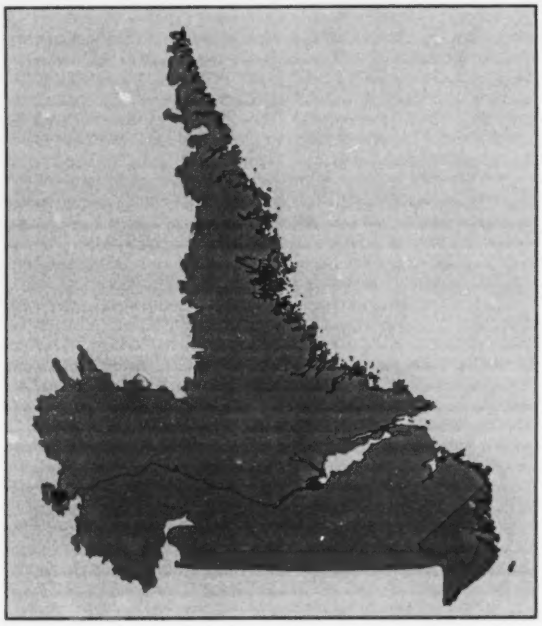
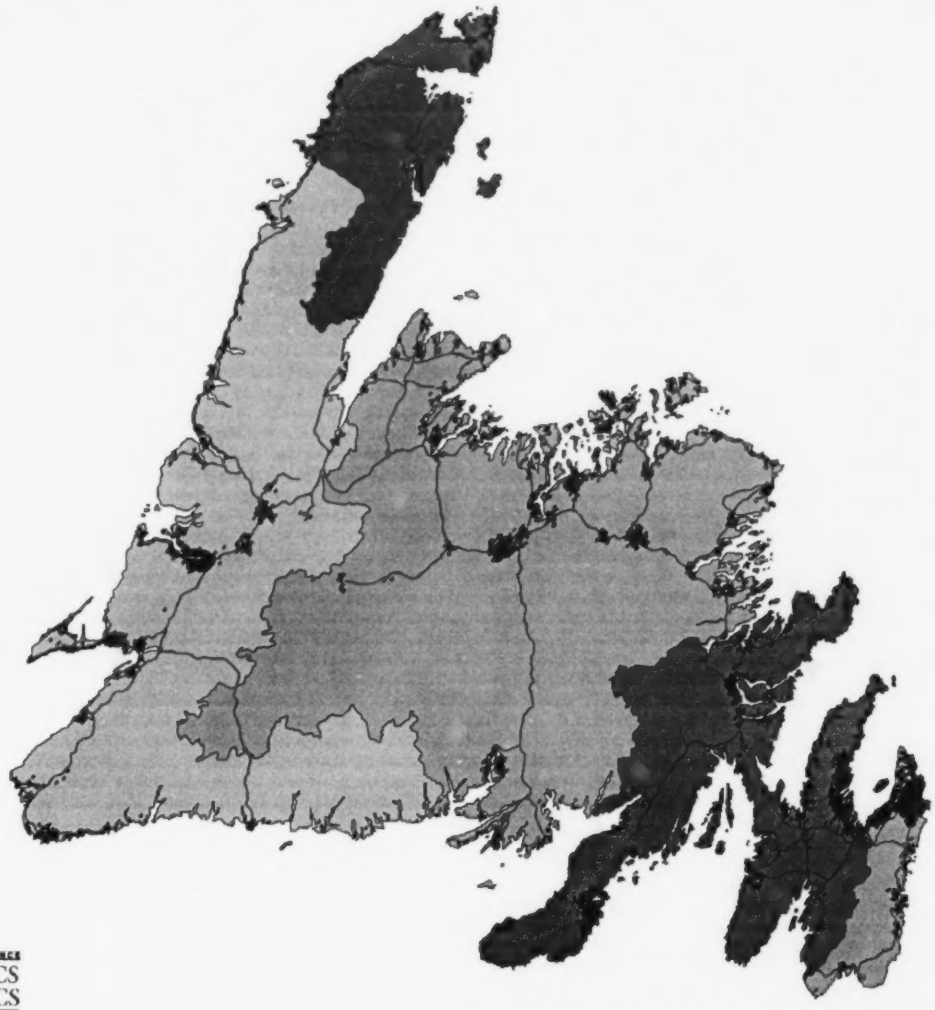


Newfoundland & Labrador Population Distribution, 2001

Health and Community Services Boards

- Health and Community Services St. John's
- Health and Community Services Eastern
- Health and Community Services Central
- Health and Community Services Western
- Grenfell Regional Health Services Board
- Health Labrador Corporation

1 Dot Represents 100 People



DEPARTMENT OF FINANCE
ECONOMICS & STATISTICS BRANCH

Table of Contents

Foreword 1

Introduction 3

Health Services 4

Personal Health Practices and Coping Skills 10

Healthy Child Development 12

Biology and Genetic Endowment 14

Social Environments 15

Social Support Networks 16

Education 17

Income and Social Status 18

Employment and Working Conditions 19

Physical Environments 20

Gender 21

Culture 22

Conclusion 23

References 24

Other Sources of Information 24

Acknowledgments 25

Please Note

Unless otherwise specified data provided are from Department of Health & Community Services data systems.

Additional copies of this document, as well as the other Regional Profiles, can be obtained from the Government of Newfoundland and Labrador Web Site at:

www.gov.nf.ca/publicat

Foreword

Julie Bettney
Minister of Health and
Community Services

It is my pleasure to join you on October 3, 2001 in the Central Region to get your perspective on the current and future health and well-being of the residents of the central area of this Province. It is our hope that through discussion with stakeholders in the Regions that we can begin to address the many issues facing health and community services in our Province.

The vast geography of Newfoundland and Labrador, with its many dispersed communities, provides its own particular challenge for service delivery. While residents of the Central Region make up just under 20 percent of the population of the Province, this region is the largest in size on the island portion of the Province, adding further to this challenge.

Throughout *Health Forums 2001*, we are conscious that budgetary considerations are an issue for all regions of the Province, and thus, we must determine how to address this to the best advantage of all concerned. While at one time the population of Newfoundland and Labrador was the youngest in the country, it is now aging more rapidly that most other provinces. This too makes us constantly aware that we need to rethink how we provide services.

Your input into this process is very important and I would personally like to thank you for your interest and participation.

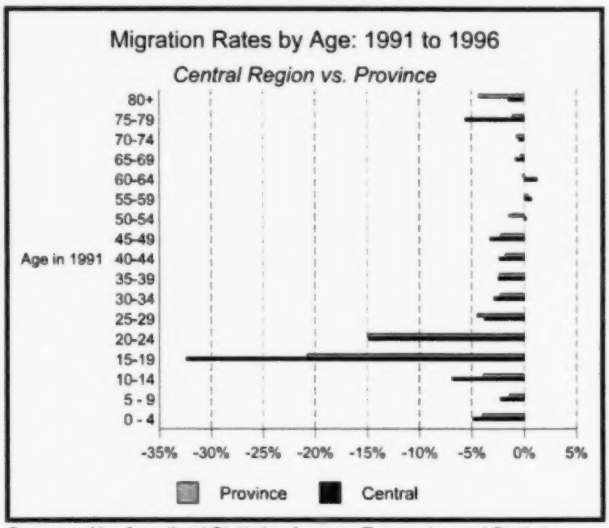
Julie Bettney, MHA
Minister of Health and Community Services

Introduction

HEALTH AND COMMUNITY SERVICES - CENTRAL REGION

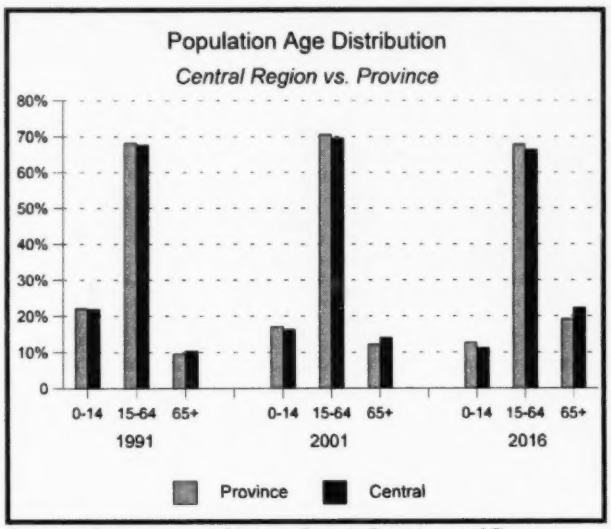
The Central Region runs from Terra Nova National Park to Sandy Lake, including coastal communities from Eastport to Purbeck's Cove. It includes the Buchans area and the Connaigre Penninsula to McCallum and Recontre East. The vast geography of the Central Health and Community Services Region poses its own set of challenges for service delivery.

Since 1991, the population of the Central Region has decreased from 120,238 to its current population of 102,430 and it is anticipated that this will decrease to 95,247 by 2016. The map on the inside front cover provides an indication of the population distribution throughout the Region, with 32 percent of residents living in Gander and Grand Falls-Windsor, or surrounding area.



Source: Newfoundland Statistics Agency, Economics and Statistics Branch, Department of Finance. Compiled based on information from Census of Population, Statistics Canada, as well as births and deaths information provided by the Newfoundland and Labrador Centre for Health Information.

The reasons for the population decline in the Central Region, and throughout the Province as a whole, are three-fold: out-migration, decreasing birth rates and increasing mortality rates. While the Province as a whole is experiencing these phenomena, the effects of out-migration vary. Like most regions, the net out-migration in the Central Region is largest between the ages of 15 and 29. Of the 15 to 19 year-olds in the Region in 1991, over 30 percent of them had migrated out of the Region before they reached the ages of 20 to 24 in 1996.



Source: Economics and Statistics Branch, Department of Finance Medium Scenario Projections, May 2002

Another interesting element of the population breakdown is the age distribution. In the Central Region there is a slightly higher proportion of individuals aged 65 and over than for the Province as a whole, and this trend is predicted to increase over the next 15 years. This too will have an impact on how programs and services are delivered in the Region.

WHAT IS POPULATION HEALTH?

Nationally and provincially there is strong support for using a population health approach to guide the current and future direction of the health and community services (HCS) system. As an essential component of all health policy, a population health approach aims to improve the health of the entire population and to reduce health inequities among population groups. A population health approach reflects the evidence that factors outside the health care system, or sector, significantly affect health. It considers the entire range of individual and collective factors and conditions - and their interactions - that have been shown to be correlated with health status. These factors are commonly referred to as the *Determinants of Health*. Crucial to this definition is the notion that these factors do not act in isolation of each other. It is the complex interactions among these factors that have an even more profound impact on health.

The Determinants of Health:

- Health Services
- Personal Health Practices and Coping Skills
- Healthy Child Development
- Biology and Genetic Endowment
- Social Environments
- Social Support Networks
- Education
- Income and Social Status
- Employment and Working Conditions
- Physical Environment
- Gender
- Culture

A population health approach recognizes that any analysis of the health of the population must extend beyond an assessment of traditional health status indicators like death, disease and disability. A population health approach establishes indicators related to mental and social well-being, quality of life, life satisfaction, income, employment and working conditions, education, and other factors known to influence health. With this in mind, this document has been prepared to provide you with an initial description of the Central Region from a health determinants perspective. It is hoped that this first Departmental endeavor at compiling such a broad array of relevant information will inform the *Health Forums 2001* consultations and be a useful tool in the decision-making process ahead.

Health Services

Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function, contribute to population health.

STRUCTURE OF THE REGIONAL HEALTH AND COMMUNITY SERVICES SYSTEM

Three Regional Health Boards provide the majority of publicly funded health and community services in the Central Region. A small number of other organizations such as the women's shelters and group homes are also publicly funded through the Provincial Health and Community Services Budget, but have separate governance structures. In addition, medical services which include both primary care and specialist services make up a significant portion of the health services available to residents of the Region.

Central East Health Care Institutions Board Facilities

James Paton Memorial Hospital
- Gander
- 92 acute care beds

- General Surgery
- Internal Medicine
- Obstetrics & Gynecology
- Pediatrics
- Orthopedics
- Ophthalmology

Fogo Island Hospital
- Fogo
- 15 acute care beds

- Primary Care
- Acute Care

Notre Dame Bay Memorial Health Center
- Twillingate
- 17 acute care beds
- 32 long-term care beds

- Primary Care
- Acute Care
- Long-term Care

Brookfield Bonnews Health Care Center
- Badger's Quay/Brookfield
- 12 acute care beds
- 45 long-term care beds

- Primary Care
- Acute Care
- Long-term Care

Lakeside Homes
- Gander
- 102 long-term care beds

- Long-term Care

Central West Health Corporation Facilities

Central Newfoundland Regional Health Centre
- Grand Falls-Windsor
- 138 acute care beds

- Dialysis
- General Surgery
- Internal Medicine
- Obstetrics & Gynecology
- Pediatrics
- Urology
- Eye, Ear, Nose & Throat
- Psychiatry

Harbour Breton Hospital
- 6 acute care beds
- 14 long-term care beds

- Primary Care
- Acute Care
- Long-term Care

Baie Verte Health Center
- 8 acute care beds
- 18 long-term care beds

- Primary Care
- Acute Care
- Long-term Care

A.M. Guy Memorial Health Center
- Buchans
- 2 acute care beds
- 20 long-term care beds

- Primary Care
- Acute Care
- Long-term Care

Green Bay Health Centre
- Springdale
- 4 acute care beds
- 78 long-term care beds

- Primary Care
- Acute Care
- Long-term Care

Dr. H. Twomey Health Centre
- Botwood
- 80 long-term care beds

- Long-term Care

Carmelite House
- Grand Falls-Windsor
- 60 Long-term care beds

- Long-term Care

North Haven Manor
- Lewisporte
- 61 Long-term care beds

- Long-term Care

Central Health and Community Services Board Programs & Services

Health Promotion and Protection
- Communicable disease control & follow-up
- Disease prevention
- Immunization
- Environmental health
- Parent-child health
- School health
- Adult health

Community Mental Health
- Children and Family
- Adult

Addiction Services
- Prevention
- Treatment
- Education

Child Youth and Family Services
- Child protection
- Adoptions
- Child care services
- Community correction
- Intervention services

Community Support Services
- Assessment and placement
- Continuing care
- Home support services
- Residential services
- Personal/Community care homes
- Special assistance for supplies/equipment
- Palliative/Respite Care

Central Region Quick Facts

- Population: 102,430
  - 0-14: 16.3%
  - 15-64: 69.6%
  - 65+: 14.1%
- 37 Health & Community Services Offices/Clinics
- 294 Acute Care Beds
  - Comprising approx. 17% of all acute care beds in the Province
- Average Length of Stay: 6-7 days
- 510 Long-Term Care Beds
  - Comprising approx. 18% of all long-term care beds in the Province
- Physicians:
  - General Practice: 78
  - Specialists: 56
- Nurses: 650
- Licensed Practical Nurses: 472
- Laboratory and X-Ray: 123
- Social Workers: 77

CENTRAL REGION HEALTH SERVICES & FACILITIES

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The three Regional Health Boards include two institutional boards and one health and community services board. The two institutional boards primarily deliver services to each half of the Region with an east and west split. Each board also delivers select speciality services to the full region, through a collaborative arrangement designed to minimize unnecessary duplication of limited medical services. The health and community services board covers the entire Region.

The Central East Health Care Institutions Board operates five facilities on the east side of the Region including two hospitals, two health care centres, and one nursing home. This Board is responsible for a total of 136 acute care beds and 179 long-term care beds. In 2000, the organization managed over 5,200 admissions/discharges, as well as 29,000 emergency visits. The James Paton Memorial Hospital is the referral center for Central East.

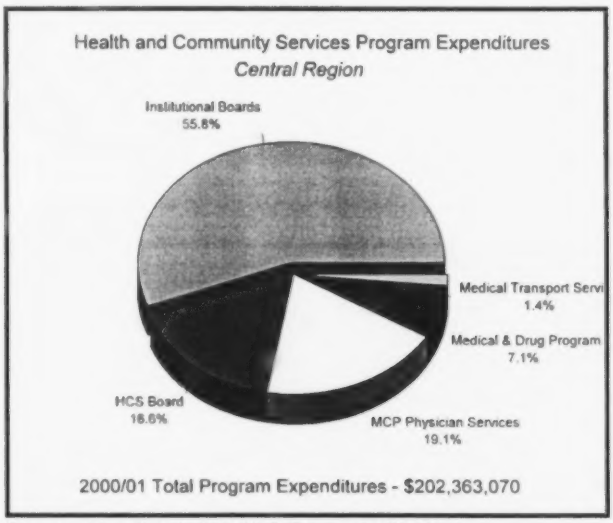
The Central West Health Corporation operates eight facilities on the Region's west side and is responsible for 158 acute care beds and 331 long-term care beds. This Board managed over 6000 admissions/discharges, as well as 49,000 emergency visits in 2000. The Central Newfoundland Regional Health Center is the referral center for Central West.

Health and Community Services - Central is the community-based board with a total of 37 offices and clinics throughout the Region. It offers a broad range of community health and services programming, primarily delivered by social workers, nurses and other allied health professionals such as nutritionists and occupational therapists. A more comprehensive overview of the services and facilities in the Central Region can be found on the previous page of this document.

Primary care medical services are provided by approximately 78 family doctors throughout the Region. A Primary Health Care Enhancement Project, one of three in the Province, is located in Twillingate and has demonstrated the value of a interdisciplinary approach to primary health care. Specialized medical services are provided by approximately 56 specialists ranging in type from anesthesiologists, surgeons and pediatricians to psychiatrists, radiologists and nuclear medicine specialists.

THE COST OF HEALTH AND COMMUNITY SERVICES IN THE CENTRAL REGION

Within the Central Region, the total expenditures in health and community services were $202,363,070. This represents approximately 16 percent of the total regional health and community services program expenditures. By far, the greatest cost in the Region, and throughout the Province, is in the area of institutional services.



Source: Department of Health & Community Services

The ability to provide the level of home support needed to address the demand throughout the Central Region, and the Province as a whole, has been a challenge for the health and community services system. While home support expenditures have increased substantially over the past decade, the need for this service continues to increase. Although the population of the Central Region accounts for just under 20 percent of that of the Province, this Region typically accounts for close to 30 percent of the home support expenditures. Thus, making this issue one of particular concern for the Region.

HEALTH AND COMMUNITY SERVICES SECTOR ACTIVITY IN THE CENTRAL REGION

Although it is difficult to accurately measure the type, level, and quantity of services delivered in the Central Region, the following information provides us with some useful knowledge about our HCS system. While most of the material provided applies to the institutional sector only, efforts are ongoing to develop data collection systems for community programming areas.

The two institutional boards in the Region manage a combined total of nearly 12,000 admissions/discharges during a year. Outpatient and emergency services are also a critical component of a comprehensive health care system. The two Regional Institutional Boards handle over 75,000 emergency visits, in addition to over 6,000 out-patient surgeries in a given year.

The most common out-patient surgical procedure is endoscopy, which involves visualization of body organs and cavities with an optical instrument. Nearly 1000 of these procedures were performed on residents in the Central Region in 1999/00. Cataract removal (or lens extraction) was also a common procedure, with 330 individuals undergoing this procedure. Of note is the large number of D & Cs performed on women in the Region. Just under 600 females had this operation. For all procedures, except the procedure involving the insertion of ear tubes (myringotomy), the vast majority of individuals were over the age of 40. With myringotomy, over 80 percent of the patients were under age 15.

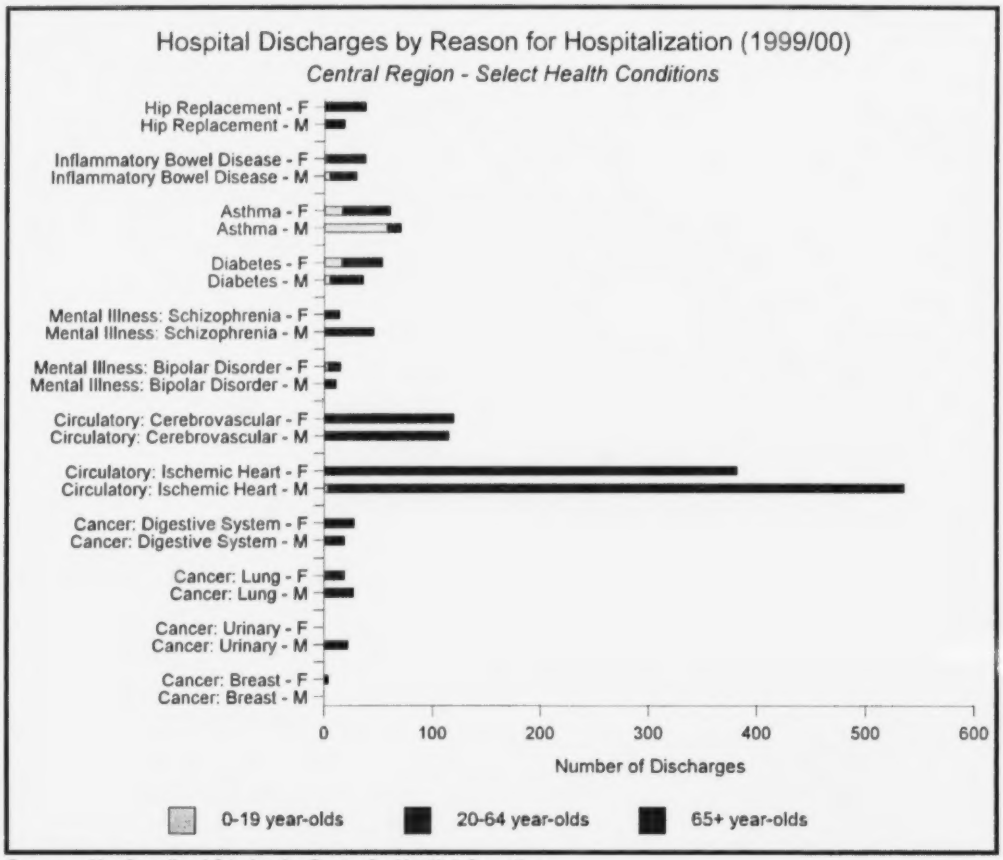
Common Surgical Day Procedures (1999/00)

	Males		Females	
Endoscopy (*non-operative*)	499	50.3%	493	49.7%
Lens Extraction	146	44.2%	184	55.8%
Heart/Pericardium Procedure	181	74.8%	61	25.2%
Skin Excision	81	42.6%	109	57.4%
Invasive Diagnostic Procedure	49	43.8%	63	56.3%
Myringotomy	62	62.0%	38	38.0%
D & C of the Uterus	-	-	599	100.0%

Source: Newfoundland & Labrador Centre for Health Information

When hospitalization patterns for a range of common health conditions are explored for residents of Central Region, a number of interesting trends emerge. The majority (61%) of hospital stays for these selected reasons are experienced by people over the age of 65. For conditions such as cancers, circulatory diseases and total hip replacement nearly three quarters of those discharged were 65 years and older. Asthma was the only disease where the majority of those in hospital were under 20 years of age (57%). Diabetes was most evenly spread among the three age groupings at 24 percent, 33 percent and 43 percent, respectively,

while inflammatory bowel disease and mental illness were predominantly found in the middle age range. In total, 46 percent of all discharges (for these conditions) were women.



Source: Newfoundland & Labrador Centre for Health Information

The publicly funded immunization programs in Newfoundland and Labrador include childhood and adult immunizations. Childhood vaccines protect against tetanus, diphtheria, polio, whooping cough, haemophilus influenzae B, measles, mumps and rubella (DPTP/Hib & MMR) in a series of six visits between the ages two months and five years. School programs include hepatitis B and a booster for tetanus in Grade Four, and diphtheria and whooping cough (TdaP) in Grade Nine. Since 1999, Level 2 students have been receiving a second dose of measles, mumps, and rubella vaccine. Adult immunizations protect against influenza and pneumococcal disease. These immunization programs are provided by community health nurses and physicians in all six regions of the Province and continue to obtain excellent coverage.

Immunization Coverage Rates

	DPTP/Hib & MMR		**Hepatitis B**	
	Central	*Province*	*Central*	*Province*
1995	99.6%	98.7%	96.6%	96.7%
1996	99.7%	98.6%	98.0%	94.0%
1997	98.2%	98.8%	98.0%	97.4%
1998	98.4%	98.2%	97.9%	96.3%
1999	96.8%	98.0%	98.3%	96.9%

Source: Department of Health & Community Services

A number of other indicators can be used to assess various aspects of the system. As we move to providing more and more acute services in an ambulatory setting, one indicator that provides some direction for these decisions is known as "May Not Require Hospitalization" (MNRH). This indicator, the percentage of cases classified as MNRH, is used to flag diagnoses where treatment may be provided on an outpatient basis. It is a useful screening tool that alerts an organization when a review of admissions/discharges may be in order to identify opportunities for more appropriate utilization. Calculation of this percentage for the province as a whole reveals that in 1999 11.4 percent of hospital admissions/discharges were categorized as MNRH. This percentage dropped slightly in 2000 to 11.1 percent. Results for the Central Region are slightly higher at 12.7 percent but these numbers are considered within reasonable limits when all factors affecting admissions/discharges are taken into account.

Another measure of institutional system performance is reflected in the length of time an individual remains in hospital for specific conditions. National guidelines have been established for many common medical diagnoses and the length of stay for each individual is measured against this standard. Results for 1998/99 indicate that patients in this Province remain in hospital, on average, for almost one day longer than would be anticipated as necessary for their condition. This figure is slightly lower in the Central Region, with individuals remaining in hospital, on average, for a half-day longer than would be anticipated.

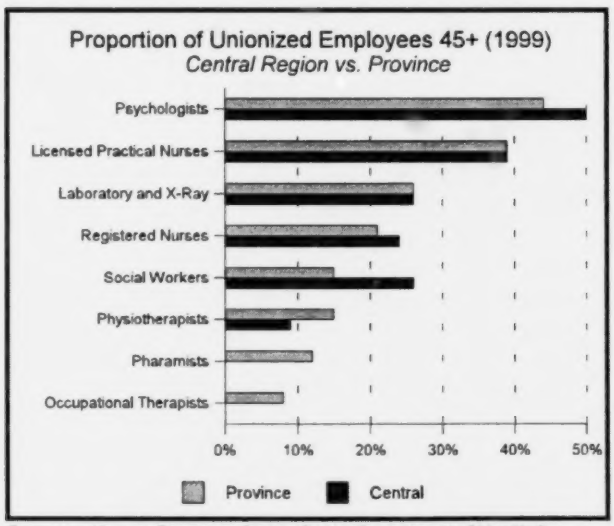
HUMAN RESOURCE ISSUES

The human resource component of the health and community services system in the Central Region reflects many important characteristics of the system as a whole. Nurses make up the largest group of professionals and are essential in nearly every aspect of the health and community services system.
As with the rest of the Province, there is a concern that the nursing workforce is aging without adequate reserves to minimize the impact of significant retirements. The situation is even more critical in the Central Region, as the percentage of older nurses working is greater than that for the Province as a whole. This same trend holds true for social workers and psychologists. There are also some clear gaps in the human resource supply for a

Selected Front-line (Unionized) Employees (1999)

	Central	Province
Nurses	650	4711
Social Workers	77	556
Pharmacists	10	72
Occupational Therapists	6	96
Physiotherapists	11	89
Psychologists	4	52
Laboratory and X-Ray	123	645
Licensed Practical Nurses	472	2526

Source: Human Resource Sector Study, Department of Health & Community Services



Source: Human Resource Sector Study, Department of Health & Community Services

number of program areas that limit the system's ability to deliver an adequate level of service. The low number of psychologists, occupational therapists and physiotherapists, amongst others, poses many challenges for the health and community services system, as well as for those seeking services. This is a long standing and unresolved situation that is experienced in all regions of the Province.

There are approximately 134 practicing physicians in the Central Region. This represents 15 percent of the total number of doctors in the Province. The proportion of general practitioners to specialists in the Central Region differs somewhat from that of the Province as a whole, with a greater percentage of general practitioners compared with specialists than is reflected provincially. Recognizing that much of the complex, specialized care is delivered outside the Central Region, this split may be a necessary one.

Number of Physicians (March 2000)

	Central		Province	
General Practice	78	58%	432	47%
Specialists	56	42%	480	53%
Total	134	100%	912	100%

Source: Department of Health & Community Services

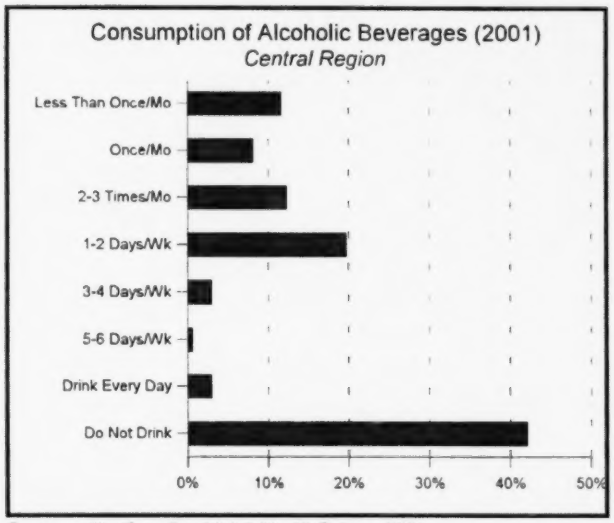
Personal Health Practices and Coping Skills

Social environments that enable and support healthy choices and lifestyles, as well as people's knowledge, intentions, behaviours and coping skills for dealing with life in healthy ways, are key influences on health. Through research in areas such as heart disease and disadvantaged childhood, there is more evidence that powerful biochemical and physiological pathways link the individual socioeconomic experience to vascular conditions and other adverse health events.

One's personal habits in areas such as smoking, drinking, eating, and routine exercise have been shown to have a significant impact on one's health. Results of the Newfoundland Adult Health Survey (2001), which surveyed individuals age 18 and over in four regions of the Province (except Grenfell and Labrador, due to response burden) provide us with some insight into these areas. Results for the Central Region were similar to those in other regions in all of these areas.

When asked about their smoking habits, 23.1 percent of respondents from the Central Region reported that they were currently smoking, with 18 to 34 year-olds being among the highest. Females were less likely to smoke than males, but this difference was less pronounced among the 18 to 34 year-olds. Overall, males were also more likely to have smoked in the past.

Major gender differences were seen in reported drinking, with females in the Region being much more likely to report that they did not drink (53.7% vs. 30.0%). This difference was most notable among those age 45 or older, and overall likelihood of drinking decreased with age for both genders. For those who reported drinking, they were most likely to drink between two to eight times a month, with 42.1 percent reporting that they did not drink at all. When questioned about the amount they drink per day, 47 percent of those who drink alcoholic beverages reported that when they do drink, they drink only one or two drinks a day, while 24 percent drank three or four per day and 27 percent were heavy drinkers, drinking five or more drinks per day.



Source: Newfoundland Adult Health Survey, 2001
Government of Newfoundland & Labrador

Routine physical activity has consistently been shown to be one way that people can achieve better overall health. Research by the Canadian Fitness and Life-styles Research Institute has found that approximately 60 percent of Newfoundlanders and Labradorians are inactive. While this has improved since 1981 when the figure was 86 percent, it is still a concern for the Province. Two out of three people in this Province are still not active enough to realize health benefits. Women are not as active as men and there is still an alarming incidence of childhood obesity all across Canada. Inactivity also decreases with higher levels of education and income. Four groups have been identified across Canada as being most at risk from inactivity: the poor, people of aboriginal/indigenous ancestry, children, and women.

The Newfoundland Adult Health Survey (2001) also looked at one's body mass index (weight/height). In the Central Region, like in the other regions, males (49.9%) are more likely to be overweight than females (42.5%) and, while incidence on being underweight is low (2.8% overall), females are slightly more likely to fall in this category than males. Traditionally the percentage of individuals overweight in this Province has been the second highest in the country. Given the low activity levels, the number of persons overweight, and our aging population, it is not surprising that we have the highest death rates due to circulatory disease in the country.

One other area where one's personal practices can have an effect on one's health is in the area of sexually transmitted diseases. Chlamydial infections are the most commonly reported sexually transmitted disease. Although the number of cases in the Province appear to have declined in the mid 1990's, they seem to be on the rise again. It is difficult to determine though whether this is due to increased testing by physicians or actual increased incidence. Most cases reported are among females between the ages of 15 and 24. Incidence of gonorrhoea have become minimal and syphillis has disappeared in recent years.

Since HIV reporting began in 1984, 205 (158 male and 47 female) cases of infection have been registered across the Province. Of these, 82 (64 male and 18 female) have become

AIDS. While there was a significant increase in HIV/AIDS in the early to mid 1990's, there appears to have been somewhat of a decline in the past few years. Most cases fall in the category of 'men who have sex with men', with 'heterosexual activity' coming in second. Of the 82 AIDS cases reported to date, 60 (51 male and 9 female) have resulted in death.

Healthy Child Development

The effect of prenatal and early childhood experiences on subsequent health, well-being, coping skills and competence is very powerful. Children born in low-income families are more likely than those born to high-income families to have low birth weights, to eat less nutritious food and to have more difficulty in school.

Currently children under the age of 15 make up approximately 17 percent of the population of the Province (16.3% for the Central Region). There are approximately 89,500 children under the age of 15 in the Province, with 16,717 living in the Central Region. During 2000 there were 884 babies born to mothers from the Central Region and 4,847 in the Province as a whole.

When discussing an issue such as healthy child development it is hard to ignore the incidence of children in families on Income Support. During 2000, over 7,300 families in the Central Region received Income Support at some point during the year. Over the past ten years, both the percentage of families on Income Support with children, and the total number of children on Income Support has dropped significantly. In 1991 there were 7,900 children in 3,630 families on Income Support, compared to 4,900 children in 2000, but the vast majority of this change can be accounted for by the overall drop in the number of children in the area, and across the Province as a whole.

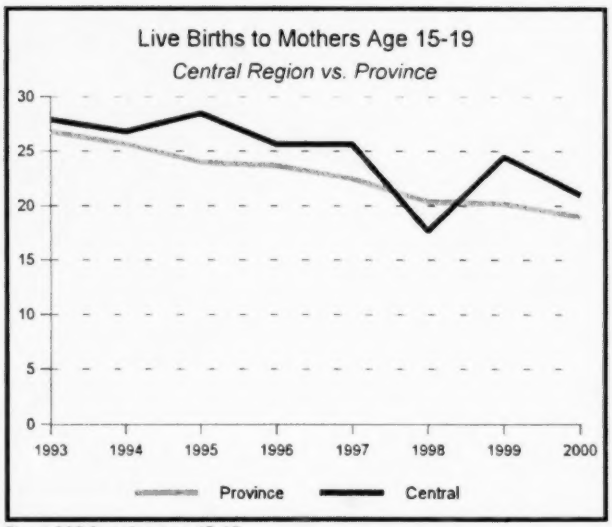
A valuable service offered to families in this Province are the federally and provincially funded Family Resource Programs located across the Province. These Programs focus on the promotion of well-being, emphasizing healthy child development and family functioning. Currently, there are 74 government funded Programs (including satellite sites) across the Province, with 21 of them being located in the Central Region. Research has also shown that access to regulated child care increases the likelihood of healthy child development. The Province currently has 133 licensed child care centres (with 5 or more spaces), which provide space for a total of 4,500 children full-time (or more part-time). Fifteen of these licensed centres are located in the Central Region, providing space of 227 children full-time. The majority of the full-time spaces in child care centres are occupied by children under the age of five. There are currently 24,603 children under the age of five in the Province, with 4,494 in the Central Region.

The Child Youth and Family Services Act, proclaimed in January 2000 reflects a cultural shift in service delivery practices. Although the safety of the child remains paramount, new ways of intervening promote early intervention and greater emphasis on prevention activities. During 2000, there were 6,549 children under the age of 16 who received some form of protective intervention service because they were vulnerable to abuse and violence. Just under 49

percent were female. In addition, residential placements were provided for approximately 900 children and youth. This includes the 228 children in continuous custody (i.e. permanent care), 302 youth over the age of 15 (who signed voluntary care agreements) and the remainder, 370, who were temporarily placed for short periods but are now back with family.

For the same period in the Central Region, 871 children (47% female and 53% male) received protective services, which represents 13.3 percent of the provincial total. As well, for those receiving residential services, 30 children were in continuous custody and 41 were youth with voluntary agreements.

Children born to teenage mothers are at higher risk for any number of difficulties. Pregnancy during the teen years disrupts educational achievement for the young mother and places her in jeopardy of low educational outcomes, poverty, and other forms of social exclusion. Adolescent motherhood is also associated with lone parenting which often brings its own set of challenges.



Per 1,000 females age 15-19

Source: Live Birth Notification System, Newfoundland & Labrador Centre for Health Information

Although there has been a steady decrease in the number of children born to mothers age 15 to 19 (and very few births to mothers less than age 15) much of this can be accounted for by the declining number of 15 to 19 year-olds in the population as a whole. With this taken into account, a slight decline in the proportion of females age 15 to 19 having children is still evident but this trend is not as consistent in the Central Region. It should also be noted that this trend is not restricted to teenage mothers. The overall birth rate for the Region, and Province, is also declining.

Babies born to teenage mothers tend to have lower birth weights than those born to older mothers. Babies born less than 2,500 grams (or 5.5 lbs.) can have a number of health concerns and these health concerns may sometimes result in death. Provincially, the overall incidence of low birth weight babies has been decreasing since 1993, with the rate in Central (43/1,000 live births) being slightly lower than that of the Province as a whole (49.5/1,000).

Biology and Genetic Endowment

The basic biology and organic make-up of the human body are a fundamental determinant of health. Genetic endowment provides an inherited predisposition to a wide range of individual responses that affect health status. Although socioeconomic and environmental factors are important determinants of overall health, in some circumstances genetic endowment appears to predispose certain individuals to particular diseases or health problems.

The National Population Health Surveys have shown that there is a link between family history and heart disease. They found that people over the age of 20 are more likely to be diagnosed with heart disease if they have a family history of the disease.

Leading Causes of Death by Disease (1998)
Rates per 100,000 population

	Central		Province	
	M	F	M	F
Diseases of the Circulatory System (includes heart attacks, stroke, etc.)	365	305	343	300
Neoplasms (Cancers)	207	156	225	175
Diseases of the Respiratory System	92	35	80	53
Endocrine & Immunity Diseases (includes diabetes)	24	64	32	38

Source: Newfoundland & Labrador Centre for Health Information

Diseases of the circulatory system are a major concern in this Province as they are the leading cause of death by disease and Newfoundlanders and Labradorians have the highest death rates due to diseases of the circulatory system in the country. The rate of deaths due to diseases of the circulatory system has been relatively constant since 1986, with males being consistently more likely to die due to this cause than females. Rates of death due to neoplasms (cancers) and diseases of the respiratory system have been steadily increasing since 1986. For neoplasm, the rate of death for males has continued to be much higher than for females. While a similar gender difference is evident with diseases of the respiratory system, this gap has widened, with males showing a steady increase. Over the 12-year period from 1986 to 1997, the rate of death due to endocrine and immunity diseases for the Central Region has been the highest in the Province for both genders.

According to the Adult Health Survey (2001), incidence of self-reported chronic health conditions are similar in the Central Region to that of the other regions surveyed with arthritis/rheumatism (28%), recurring backaches (22%), high blood pressure (19%), and allergies (17%) being the most common conditions reported by individuals in the Region. The 1996/97 National Population Health Survey found that Newfoundlanders and Labradorians have the second highest self-rated health status in the country, with 26 percent rating their health as excellent and 65 percent rating their health as good or very good. However, life expectancy remains among the lowest in the country (NF: 77.7 years at birth, Canada 78.6 years at birth). As is the case across the country, women (80.5 years) in the Province tend to live longer than men (75.0 years).

According to Statistics Canada's Health and Activity Limitation Survey (1991) ten percent of the population (approx. 57,953 people) of Newfoundland and Labrador has some form of physical or mental disability. This rate is highest among individuals over age 65 (41.4% or

approx. 23,086 people). As of 1991, 97.5 percent of individuals under the age of 65 with disabilities were residing in households (2.5% were residing in institutions) compared to 85.6 percent for those age 65 or older (14.4% were residing in institutions). As a result of de-institutionalization, persons with disabilities now receive supports allowing them to reside in the community.

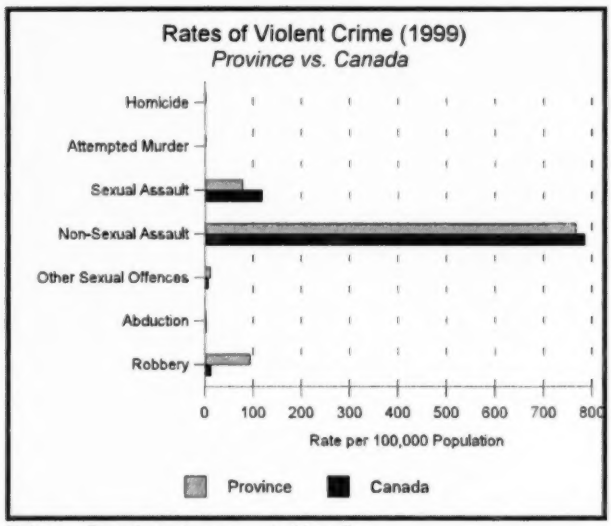
Social Environments

The array of values and norms of a society influence in varying ways the health and well-being of individuals and populations. In addition, social stability, recognition of diversity, safety, good working relationships, and cohesive communities provide a supportive society that reduces or avoids many potential risks to good health. Studies have shown that low availability of emotional support and low social participation have a negative impact on health and well-being.

Results from the 1996 census provide us with a profile of the family characteristics throughout the Region and the Province. Family sizes in this Province tend to be small with two-person families comprising 36.8 percent of all families, three-person families at 26.2 percent, four-person families at 25.8 percent, and five or more person families comprising only 11.1 percent. This trend is also reflected in the Central Region. The vast majority of families in Newfoundland and Labrador continue to be husband-wife families, with over 90 percent of them being married. While 13.1 percent of all families in the Province are lone-parent families, only 9.3 percent of those in the Central Region are lone-parent families, with the majority having only one child.

Income Support statistics indicate that while the proportion of households headed by youth under the age of 25 availing of Income Support has continued to decrease over the last several years, nearly 20 percent continue to be headed by youth. (Note: a household may contain only one individual.) As a result of the new Child, Youth and Family Services Act, the Health and Community Services and Integrated Boards also have legislative authority to enter into agreements to provide services to youth age 16 and 17. In Newfoundland and Labrador there are 303 youths in receipt of residential services to live independently (41 in Central) and 28 who continue to live at home (4 in Central) but receive intervention services.

Incidence of crime, especially violent crime, in an area also affects one's health and well-being. Newfoundland and Labrador continues to have the lowest overall crime rate in the country and the fourth lowest rate of violent crime; behind Quebec, Prince Edward Island, and Ontario. While the Province continues to have low rates of homicide, attempted murder, abduction, and robbery, our assault rate is higher than the national average. This is particularly noticeable when it comes to sexual assaults.



Note: Based on crimes reported to police

Source: Canadian Crime Statistics, 1999, Statistics Canada. Catalogue no. 85-205-XPE.

During 2000/01, there were 103 incarcerations from Provincial Courts in the Central Region. The rate (1.2 per 1000 population) of incarcerations was lower than that for the Province as a whole (3 per 1000). Youths aged 15 to 24 comprised 20.4 percent (NF: 27.3%) of all incarcerations, while individuals over the age of 54 accounted for only 4.9 percent (NF: 5.8%).

Social Support Networks

Support from families, friends and communities is associated with better health. The importance of effective responses to stress and having the support of family and friends provides a caring and supportive relationship that seems to act as a buffer against health problems.

Newfoundlanders and Labradorians are among the most generous and caring in the country when it comes to donating their time and money. According to Statistics Canada's recently released document, *Caring Canadians, Involved Canadians,* the residents of this Province lead the country in volunteer hours, with the average volunteer giving 206 hours of their time annually; compared to a national average of 162 hours. Provincially, 31 percent of the population gives of their time to volunteer activities. This again, is higher than the national average of 26.7 percent. Additionally, eight out of ten Canadians reported that they contributed time, on their own, to assist people outside their household with basic activities such as: shopping, driving to appointments or stores, housework, baby-sitting and doing home maintenance or yard work for others.

What is of concern, is that between 1997 and 2000 there was a notable decrease across the country in the number of individuals volunteering, while those volunteering were giving more hours. This may have some considerable implications for the future of a province, such as

ours, that has relied heavily on unpaid supports both within and outside of the family. It is already apparent that it is difficult to recruit new volunteers and those who are volunteering are stressed to the limits. This needs to be taken as a caution to not take volunteer support for granted, assuming that we can count on a sustainable volunteer base into the future and to be cautious that our volunteers are not taking on too much and, as a result, jeopardizing their own health and well-being.

According to the National Advisory Council on Aging, relatives and friends provide between 75 and 80 percent of all personal care in Canada. The vast majority of these caregivers are women and a large number are over the age of 60. The health system has always depended on these informal caregivers to provide a certain amount of care and they are an integral part of our communities. Again, the concern is that these people are getting older and are often taking on too much.

In addition to social supports received through one's family and friends, people often receive comfort and support through being a member of an organization or group. Like Canadians in general, just over 50 percent of Newfoundlanders and Labradorians aged 15 and older are members of an organization or group. These groups often play a vital role to people, especially in times of stress, and serve to strengthen communities as a whole.

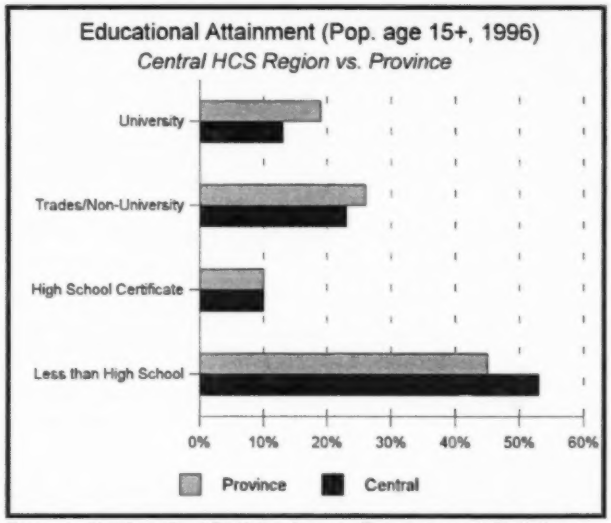
Education

Health status improves with level of education. Education increases opportunities for income and job security, and equips people with a sense of control over life circumstances - key factors that influence health.

The secondary school system in the Central Region is comprised of two School Districts, Baie Verte/Central/Connaigre and Lewisporte/Gander, and has 79 public schools and one Native Federal School. The Region also has a vast number and variety of post-secondary education facilities. The public college, the College of the North Atlantic, has campuses in Baie Verte, Gander and Grand Falls-Windsor. The campus in Grand Falls-Windsor also offers the College/University Transfer Program. There are also seven Private College Campuses in the Region, operated by: Central Training Academy (Badger), Corona College (Grand Falls-Windsor), DieTrac Institute (Grand Falls-Windsor), Gander Flight Training (Gander), Keyin College (Gander & Grand Falls-Windsor), and Springdale Aviation Flight Training (Springdale).

High school pass rates across the Province have risen steadily from 63.5 percent in 1988/89 to 90.4 percent in 1999/2000. This represents an overall increase of nearly 27 percentage points in the last 12 years. For 1999/2000, the high school pass rate for the Central Region was comparable to that of the Province as a whole, at 90.5 percent.

According to the 1996 census, 53 percent of individuals in the Central Region had less than a high school education. This is slightly higher than the Provincial figure of 45 percent. This may reflect the fact that the Region has a higher proportion of individuals over the age of 65 who are more likely to have not completed high school during the 1920's and 30's. Regardless, this needs to be taken into account in the day-to-day communications with people to ensure that they are provided with good information in a manner that they can understand in order to make informed choices about their lives.

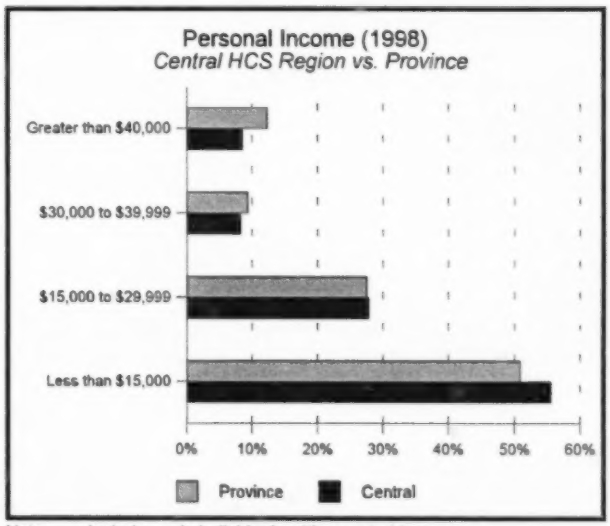


Source: Newfoundland Statistics Agency, Economics and Statistics Branch, Department of Finance. Compiled based on custom tabulations from the Census of Population, 1996, Statistics Canada.

Income and Social Status

Health status improves at each step up the income and social hierarchy. High income determines living conditions such as safe housing and ability to buy sufficient good food. The healthiest populations are those in societies which are prosperous and have an equitable distribution of wealth.

Personal income in the Central Region is comparable to that of the Province as a whole. While there may be a slightly higher proportion of individuals in the lowest income bracket, this needs to be balanced with the cost of living across various areas of the Province. One clear determinant of income level that continues to be seen is educational attainment. The higher an individual's educational attainment, the greater likelihood that they will be in a higher income bracket.



Note: Includes only individuals with reported income

Source: Newfoundland Statistics Agency, Economics and Statistics Branch, Department of Finance. Compiled based on Canada Customs and Revenue Agency summary information as provided by Small Area and Administrative Data Division, Statistics Canada.

Personal income includes income obtained through the various social transfers such as: Old Age Security, Canada Pension Plan, Child Tax Benefits, GST Credit, Employment Insurance, Workers Compensation, Income Support, and NCARP/TAGS. In 1998, 33.2 percent of the personal income in the Central Region was from social transfers, as opposed to 25 percent for the Province as a whole. This incidence of social transfers is typical in regions with a large rural component and seasonal employment. The most notable differences in the Region are in Employment Insurance and Old Age Security; again, tied to seasonal employment and the larger proportion of seniors in the Region. Incidence of Income Support in the Central Region is comparable to the Province as a whole, with 16.8 percent of individuals in the Region being in receipt of Income Support at some point in time during 1998.

Results of the 2001 Newfoundland Adult Health Survey indicate that people in the Region generally are not worried about having enough to eat due to lack of money, nor has this ever actually been a problem for them. Some people did indicate, however, that they did not eat the quality or variety of foods that they wanted to because of a lack of money (3.4% saying often & 12.7% saying sometimes). These results would suggest that food insecurity is not a critical problem throughout the Region.

Employment and Working Conditions

Unemployment, underemployment and stressful work are associated with poorer health. People who have more control over their work circumstances and fewer stress related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities.

According to the Newfoundland and Labrador Labour Activity Survey, the average weekly employment rate in 1999 for the working age population (18-64) in the Central Region was among the lowest in the Province at 50 percent, compared to 59 percent for the Province as a whole. Seasonality was also evident in the Region, as illustrated by a range in employment from 45 percent in winter to 55 percent during the summer. Of the working age population in the Region, 63 percent (NF: 72%) worked at some time during the year and 21 percent (NF: 18%) collected Employment Insurance at some point during the year.

Not surprisingly, educational attainment was shown to be a major contributing factor to the employment rate, with those having completed a post-secondary program being significantly more likely to be working. The major employers in the Central Regions were in the areas of health care and social services, retail trade, fish harvesting/fisherpeople, construction, and educational services. The prevalence of individuals employed in fish harvesting and construction is indicative of the seasonality of employment experienced by some individuals.

One's age, gender, industry and occupation are all determinants of workplace injury. The average age at which a worker becomes injured in the Province is 37 and frequency of injury declines with age, while clinical severity generally increases. Work-related injuries occur at higher rates in men. Over the 10-year period from 1989 to 1998, 69.6 percent of all lost-time

claims were registered by males. During the same period, 49.3 percent of all lost-time injuries occurred in the service industry. This is not surprising given that over 60 percent of all provincial employers are classified in this category. The risk of injury is also dependent on one's occupation. The labouring profession has had the highest frequency of injury, with 12.1 percent of claims being registered by workers involved in labour and elemental work. Another interesting finding is that, in general, hourly paid employees have significantly higher rates of injury than salaried employees. Overall, the majority of claims are due to sprains an strains, primarily of the musculoskeletal origin, with the most common being back injury.

Physical Environments

Physical factors in the natural environment (e.g., air, water quality) are key influences on health. Factors in the human-built environment such as housing, workplace safety, community and road design are also important influences.

The 1996 Census found a high degree of home ownership in Newfoundland and Labrador, with 77 percent of individuals owning their homes. In the Central Region, the rate of home ownership is even slightly higher, at 83 percent. For those owning their homes, the average monthly payment (including heat, light & municipal taxes) in the Central Region was lower than that for the Province as a whole ($365 and $469, respectively), while average monthly rental payments (including heat, light & any applicable municipal taxes) were comparable ($478 and $498, respectively).

As indicated in the previous section, the type of occupation one has and the sector one works in also are an important determinants of one's health and well-being. An individual who works in a labouring profession and/or works in the service industry may be at a higher risk of injury.

Interestingly enough, while we have made many strides to reduce exposure to second-hand smoke over the past 10 years, the Newfoundland Adult Health Survey (2001) found that 40 percent of all respondents reported that they had been exposed to second-hand smoke in the past month, with the most commonly sited location being in public places (63%). Sixty-five percent of respondents also indicated that they are bothered by smoke from cigarettes and 88 percent said they supported having a 'No smoking policy' in public places.

Undoubtedly, the quality of the drinking water in a community is a concern for residents. While people often see water advisories as a concern for their health, illnesses due to water impurities are very rare in this Province. Although there are approximately 392 water supplies that currently have boil water advisories in affect (*figures are as of September 26, 2001*), these are precautionary measures and once the water is boiled it is completely safe for consumption.

Advisories currently affect approximately 259 communities across the Province. The advisories are typically put into effect due to inadequate disinfection, inadequate chlorine levels, or unsatisfactory bacteriological test results. In the Central Region there are currently 96 water supplies with boil water advisories affecting 77 communities.

An additional water quality issue that affects people's drinking water is Trihalomethanes (THMs). Out of the 333 tested water supplies across the Province, 70 do not conform to Health Canada guidelines of 100 micrograms per litre for THMs, while all other chemical testing indicates very good water quality. Thirty of the water supplies tested with high levels of THMs are in the Central Region. Efforts are currently under way to mitigate against high THMs levels for the communities in which they have been identified.

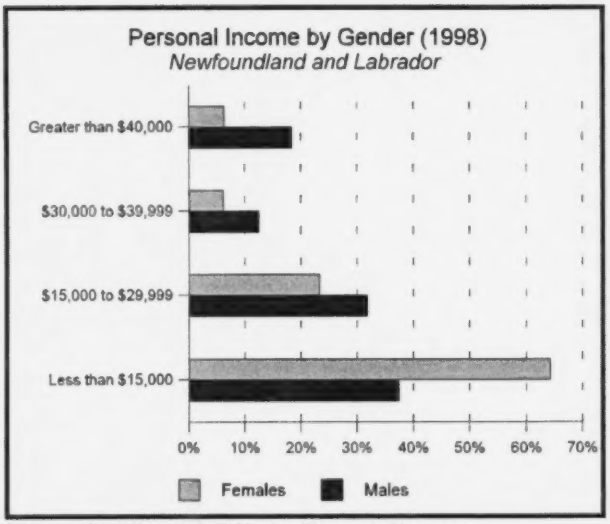
Gender

Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. "Gendered" norms influence the health system's practices and priorities. Many health issues are a function of gender-based social status or roles. Women, for example, are more vulnerable to gender-based sexual or physical violence, low income, lone parenthood, gender-based causes of exposure to health risks and threats (e.g., accidents, STDs, suicide, smoking, substance abuse, prescription drugs, physical inactivity). Measures to address gender inequality and gender bias within and beyond the health system will improve population health.

High school pass rates continue to be substantially higher among females than males, and this remains a considerable source of concern. While the pass rate for males has risen over the past 12 years, there is still a very noticeable gap. These gender differences were similar in the Central Region to that of the Province in 2000, with the pass rate for females being 93.4 percent and 87.1 percent for males.

While historically, overall differences in educational attainment throughout the population were apparent between males and females, this difference has all but disappeared in the Central Region and for the Province as a whole. Although these gender differences have dissipated, significant differences still remain in levels of income both within the Central Region and across the Province as a whole. This is not specific to the Province and remains an issue of national and international concern. Significantly higher proportions of females remain in the lowest income brackets and few achieve the higher incomes. As of 1998, females continued to earn an average of 42 percent less than men. Additionally, when one looks at employment rates in the population, women are 10 percent less likely to be employed than men. These factors have significant implications for women, especially as they age and it affects their pensions.

Women continue to be the major caregivers in our Province, both informal and formal. The large majority of front-line health professionals (nurses, social workers, and licensed practical nurses) are women and women continue to provide the vast majority of personal care through home support services and unpaid support to relatives and friends. Additionally, women live longer and may require personal care themselves for longer periods of time. This, coupled with gender differences in income and employment, may have a significant impact for the futures of women in this Province and the country as a whole.



Note: Includes only individuals with reported income
Source: Newfoundland Statistics Agency, Economics and Statistics Branch, Department of Finance. Compiled based on Canada Customs and Revenue Agency summary information as provided by Small Area and Administrative Data Division, Statistics Canada.

Culture

Some persons or groups may face additional health risks due to a socio-economic environment, which is largely determined by dominant cultural values that contribute to the perpetuation of conditions such as marginalization, stigmatization, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services.

The Central Region has several communities with significant Aboriginal populations. The Miawpukek Mi'kmaq Band living on the Conne River Reserve, located on the south coast of the island between Bay D'Espoir and Harbour Breton, is the only Indian Band in the Province recognized under the federal Indian Act. Other registered members of the Conne River Band live off-reserve in the communities of St. Alban's and Glenwood. There are also non-status Indian Bands, in the communities of Glenwood and Gander Bay and the Exploits region, who are members of the Federation of Newfoundland Indians.

While the Province has a broad cultural diversity, historically, having been settled by peoples from all over the globe, English is by far the most common language spoken in homes across the Province (98.5%); with small proportions of the population speaking French (0.4%), Aboriginal languages (0.3%), Germanic languages (0.15%), Chinese (0.13%), and other languages (0.52%). The cultural diversity in this Province is more widely seen through the variety of traditions and religious practices throughout the Province.

Conclusion

The Central Region is a diverse and valuable part of the Province that is rich in wisdom and teachings. Its three regional health boards provide health and community services to a diverse population over the largest geographical region in the Province. We have much to learn from both the residents and history that can be of great benefit to the entire province. Our provincial health and community services system has been, and will continue to be, improved as a result of the participation, commitment and hard work of many individuals and organizations from this Region. The people of Central Newfoundland know that their continued involvement is critical to the decision making process facing the health sector today. Successful outcomes will be achieved if we all work together. If you would like to provide any further input into this process, please fell free to respond to Reaching Consensus and Planning Ahead.

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Newfoundland and Labrador Centre for Health Information Web Site: *www.nlchi.nf.ca*

Health & Community Services Central Region Web Site: *www.hcsc.nfld.net*

Central East Health Care Institutions Board Web Site: *www.cehcib.nf.ca*

Central West Health Corporation Web Site: *www.cwhc.nf.ca*

Acknowledgments

This document was made possible through the efforts of not only the Department of Health and Community Services but many other Departments and Agencies. We would like to express a special thank you to the Newfoundland Statistics Agency, Economics and Statistics Branch, Department of Finance, and the Newfoundland and Labrador Centre for Health Information; who dedicated many hours to compiling the data contained throughout this document.

We would also like to that the following individuals and groups who provided us with information from their area and/or assistance with the document preparation:

- Planning and Evaluation Division, Department of Health and Community Services
- Financial Services Division, Department of Health and Community Services
- Disease Control and Epidemiology Division, Department of Health and Community Services
- Economic Research Division, Economics and Statistics Branch, Department of Finance
- Corporate Planning and Research Division, Department of Education
- Department of Justice
- Sport Newfoundland and Labrador
- Labrador and Aboriginal Affairs
- Workplace Health and Safety Compensation Commission
- Department of Environment

Our thanks go out to the Strategic Social Plan Regions for hosting *Health Forums 2001* and to the Regional Health Boards for their input and support.